

### Abstract

An x-ray diagnostic imaging system with an x-ray irradiation unit for irradiating an object; an x-ray diaphragm unit for shielding the irradiated x-rays except for the x-rays  
5 irradiated on a portion used for obtaining an x-ray image of the object; an x-ray diaphragm setting unit for variably setting the portion to be shielded; an x-ray flat panel detector opposed to the x-ray irradiation unit via the object to be examined; an image processing unit for subjecting the x-ray  
10 image to an image processing; and a display unit displaying the x-ray image. The image processing unit includes a calculation unit reading out data of an x-ray detection element and calculating a line noise component from the read out data; and a line noise correction unit correcting a line noise of  
15 the x-ray image based on the line noise component calculated by the calculation unit.